

of hysteria or neurasthenia until we have carefully eliminated the probabilities of organic disease and of the major psychoses. That neither of them is a definite disease but rather a manner of reaction, should always be kept in mind, and the frequent association of symptoms characterizing them, with organic disease in the nervous system and elsewhere, must be constantly before us. While psychopathological researches are helping us to a better understanding of their symptoms, their ultimate causes are multifarious and many of them date far back in the history of the race. For their elimination by prophylaxis from future generations, we must begin at the fountain-head, with the existing ancestors of those yet unborn. When the science of eugenics has made such progress that as much attention is paid to the propagation of the human race as is now given to the breeding of our more valuable domestic animals, we may expect a reduction in the number of cases of nervousity and insanity. In neutralizing the causes more immediately operative, general diffusion of knowledge with regard to physical and mental hygiene, the elimination of preventable diseases, the education of the public as to the evils of alcoholic and drug addiction and social progress in the adjustment of work and wage, will lend their part.

As to the processes in the individual organism which give rise to the neuroses, studies in metabolism have so far failed to give us much aid, and that they will ever bring to light any one efficient cause seems very improbable. Continued work along this line, with ever improving methods may, however, enable us to pick up some links in the chain of visious processes with which the victim is bound up, and may eventually give the clue to the disentanglement of the whole. Psychotherapy, so hopefully and so confidently proposed for the treatment of the neuroses, is too large a subject to be discussed in this paper. In the main it is, after all, but the application of the principles of mental hygiene and mental training, based upon knowledge of mental processes. That physicians should acquire this knowledge and should make use of it goes without saying. In all these things, the role of the general practitioner is a most important one. He it is who, knowing intimately the inherited traits and the mental and physical make-up of his patients, can intelligently counsel and direct their manner of life, choice of occupation and selection of a consort, and who can, and should, by voice and example, further all proper and practical schemes for hygienic and social progress. To no one else is given so great an opportunity, and to none so grave a responsibility, in working toward the future elevation of the human race.

THE NORMAL SHAPE OF THE STOMACH; ITS PHYSICAL AND DIETETIC THERAPY.*

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The great charm of surgery is that its remedies are mechanical and the good results following operations are obvious and reasonably sure. This

may be said of the physical and dietetic treatment of most digestive disorders. There is no drug which favorably influences the stomach in the way of stimulation of its secretion, and a very few which have a reputed sedative influence, and even this is disputed. Where there is suffering as the result of stagnation of irritating contents, any alkali may relieve by neutralizing its acid contents, or any evacuant by emptying it completely; this is only relieving a symptom for the moment, and in no way influences the stomach for good. Stagnation of stomach contents is the main cause of the present suffering, and the future progress from bad to worse of all stomach diseases. Mechanical drainage of the stomach is just as important as of a pus cavity.

Boas says that "the chief task of gastric therapeutics must be to regulate the motor functions of the stomach."

Prof. A. E. Taylor of the State University says: "Now the motor functions of the stomach are the most important because they are the least dispensable, and the most important because their loss can be compensated for with the greatest difficulty. . . . The important functions of the stomach physiologically and pathologically are the motor functions, and the lesser functions physiologically and pathologically are the chemical and digestive functions."

The natural position of the stomach allows evacuation of its contents without any muscular aid at all; that is, the pylorus is the lowest point of the perfectly normal stomach. The exact determination of this has only been possible by X-ray pictures of the stomach filled with an opaque bismuth paste. This has been shown by Max Einhorn, Leven, Barret, Holzknecht and Rieder. Recent text-books up to 1906 do not show this.

Only 10 per cent of healthy adults have this normal position, but most healthy children have. In the 90 per cent of healthy adults having not a strictly normal position, it causes no symptoms because compensated by muscular action and development; when compensation fails, then we have symptoms just as in broken cardiac compensation.

The oldest representations of the stomach show it as horizontal in position, with the large curvature as a deep pouch, and the pylorus only a little below the cardia; as these pictures will show, the pylorus is in the course of time (in the anatomies) getting lower, the cardia higher and the stomach assuming a vertical position; the deep hanging pouch still persists, but becomes more shallow, until in 1906 the pouch disappears entirely, and we have the ox-horn shape of Holzknecht.

Although Holzknecht finds his shape in 70 per cent of healthy children and in only 10 per cent of healthy men, he assumes it as the normal type. Rieder with the same findings, assumes his shape as the normal from its prevalence. The reasoning of Rieder will do in determining the normal attachment of muscles, or the distribution of arteries, which organs are not changed by use or abuse, but it will not apply to the stomach and large intestines. Every bilious attack with vomiting, tends to alter the shape of the stomach from Holzknecht's to Rieder's form; and how few persons there are who have

* Read before the San Francisco County Society.

not had many such attacks. I saw in the last month a girl of 13 years with perfectly cylindrical straight toes; she had worn open sandals most of her life. I do not remember to have seen before a white person except with variously curved and prismatic toes. Are we to conclude that this last shape of toe is the normal because the prevalent type? The abuse of the foot as well as of the stomach is well nigh universal, and so the abnormal type of both prevails. The Holzkecht type is apparently the best suited to fulfil its function, viz., prompt and complete emptying between meals.

The outlets of the urinary and of the gall-bladder are also the lowest parts of these organs, and we often see the ill-effects of a raised outlet when the bar of an enlarged prostate gland exists. I trust that these are valid arguments for the adoption of the cow's-horn shape as the normal type for the stomach, and the vertical position.

The abnormal position and shape of the stomach in 90 per cent of healthy adults may not constitute a disease, but it must be an ever present predisposing cause of other diseases, viz., bilious attacks, post-operative dilatation, migraine, hyperchlorhydria and ulcer. The correct form and shape of the stomach being accepted by the medical world, will have important results in practice. When we see that nature has made such a double arrangement, both by gravity and muscular contraction, to effect the prompt and complete emptying of the stomach between meals, we are more likely to aid her by those almost obvious physical measures of position after meals, small meals, finely divided food, cold water only before meals, than by the uncertain action of drugs. It should make the general practitioner realize the folly of delaying surgical intervention in all severe cases of gastric disease, as there is certain to be a motor derangement in all of them.

The principle of treatment in nearly all gastric disorders is to restore the drainage by, first, raising the lowest part of the stomach to the level of the pylorus by a tight bandage over the lower half of the abdomen; this always does some good in cases where the epigastrium is hollow and the hypogastrium is bulging in the erect position. Even in cases where by the X-ray the position is shown not to have been much altered, the distressing nervous symptoms have been entirely relieved; this was because the relaxation of all the abdominal organs, especially the blood vessels, allowed an excessive amount of blood to accumulate in them with a corresponding anemia in other organs; the equilibrium of blood distribution is restored by the abdominal compression. An abdominal bandage should have no elastic in it, and should fasten in front with corset steels.

Prof. Morton found by the X-ray that in many cases of ptosis of the stomach, voluntary contraction of the abdominal muscles would raise the stomach to its normal position; a rise of three or four inches was not uncommon. Abdominal exercises may give a long relief to the sufferings and disorders caused by gastropotosis.

Second, raising the lowered part of the stomach by lying down for three hours after meals, or dur-

ing the period of digestion; this is not suited for all occupations, but the results are often brilliant. To make a digression, I believe that the brilliant results of the rest cure have been in undiscovered cases of gastropotosis or gastrectasis. For persons who must stay on their feet, the liquids at meals must be restricted and the food very finely divided; for those who lie down after meals, much liquid food may be taken. Where plans one and two do not relieve, or cannot be applied, the only resort is gastro-enterostomy, and this must be done before the patient's nutrition is seriously compromised.

A pressing indication for surgical interference in chronic disorders of the stomach is given by a loss of weight of 20 per cent from the norm of 2 1-5 pounds for every inch of height; if the loss is greater than this, the result of operation is likely to be fatal. The losses of weight by fasting in previously healthy persons—Cetti, Succi, Tanner, in shipwrecks, and in attempts at suicide, show that a loss of 40 per cent may be easily recovered from without injury to the subsequent health; the reason of the difference is that in the persons operated upon there has long existed a stagnation of the stomach contents, with abnormal fermentations and production of toxins, whose absorption has lowered their vital resistance.

As there is no drug which acts well and with moderate certainty on the secretory disorders, it seems either a waste of time or a dishonest temporizing to continue drug treatment long; there is some motor disorder at the bottom of every chronic gastric disorder; even if we could remedy the secretory disorder, the motor disorder would remain. Fortunately the reverse is not the case. The results of the analysis after gastro-enterostomy have uniformly shown a restoration to normal chemism where hyperacidity had existed, and also in some cases of hypoacidity; where the hypoacidity was the result of complete atrophy of the gastric glands this could not be expected.

It has been shown by X-ray pictures of the bismuth-filled stomach, that when digestive troubles recurred, after a long period of relief in persons subjected to gastro-enterostomy, the cause was always a closure of the opening, or a sinking of the stomach below the level of the opening, thus allowing stasis to recur.

The secretory disorders are much controlled by diet: much salt, and all spices increase the acidity; an absolute salt free diet extinguishes the HC acidity; all fats and finely divided foods decrease abnormal acidity. The motor and secretory disorders are still more controlled by a suitable diet: by this is not meant taking away each food which is found to disagree; this means starvation, which is worse than the original disease. Any kind of food will agree if in proper physical condition, and any kind of cooking, except fried foods; the optimum for the proteid foods is that they reach and remain in the stomach in a state of the finest division, and warm; for all breadstuffs the ideal is that they be eaten as dry as possible, without any admixture of liquid, soft food, gravy, sauce, preserves, fruit, to soften them except the saliva. The breadstuffs may be given as bread,

toast, crackers, rice, cornbread; the drier the bread-stuffs are eaten the better they will be assimilated, as they are thereby better insalivated.

Where there is no serious anatomical disease, a suitable diet will cure, and even where there is, a suitable diet will often greatly relieve. Of chief importance in prescribing a diet in chronic disease, that the quantity must not be reduced below the physiologic minimum; a quantity that will furnish 2300 calories; this is, roughly, equal to 400 grammes bread, 200 grammes roast meat, 75 grammes fat. Roast meat presumably disagreeing, any form of proteid food may be substituted: milk, soft eggs, brains, tripe, boiled fish, minced meats; all foods must be in a finely divided state; milk as a liquid is in a finely divided state, and yet it often oppresses the stomach like meat, because when taken into some stomachs it coagulates into large, hard lumps, which have the same effect as similar pieces of meat; when milk oppresses it should be modified by heating with some cereal, or given as buttermilk, junket, or peptonized. Meats must be minced after cooking, as that process causes the fine pieces to cohere in large lumps nearly as tough as before. Cream, olive oil, plain or emulsified, butter, bacon fat, beef fat, may be substituted for each other according to the taste, as they are equivalent in nutrition.

SOCIETY REPORTS

ALAMEDA COUNTY.

The meeting of the Alameda Medical Association, for February 15th, was called to order at 8:40 p. m., Dr. Dukes in the chair.

On motion reading of the minutes of the previous meeting was dispensed with.

Dr. von Adelung presented an interesting case of filariasis also chylous urine and microscopical specimen. Patient improving under Wherry McDill treatment.

Dr. Crosby reported having this patient in his care for some weeks about one year ago. At first urine was clear, after about two weeks became chylous, than cleared again.

Dr. Wellman stated that in this case the filaria decreased from 500 per c. c. to 100 during cinchonization. Experiments by Dr. Wellman are now in progress to determine whether mosquitoes indigenous to Oakland may disseminate the disease.

Owing to Dr. Emerson's illness, his paper on the "Surgical Anatomy of the Stomach and Duodenum" with demonstration, had to be omitted.

Also Dr. Rowell's paper on the "Physiology of the Stomach," he not being able to attend the meeting.

Dr. McClurg's paper on "Laboratory Findings in Gastric Ulcer" was read by Dr. Powell.

Dr. Boyes presented a paper on the "Symptomology and Treatment of Gastric Ulcer."

Dr. Hamlin gave a paper on "Gastroenterostomy," demonstrating the operation with drawings.

Dr. Clark presented a patient upon whom gastroenterostomy had been performed. Patient had regained weight, felt well and digestion good.

The cases presented and the papers read brought out an interesting discussion.

Dr. Stratton sounded the warning not to place too much dependence on laboratory findings at the expense of clinical symptoms, such as time of pain, localized tenderness, etc. He had seen perforated ulcers healed without vestige of a scar remaining, having had the opportunity of seeing the patient at necropsy.

Dr. Dudley Smith differed with Dr. Boyes in the use of atropin to control hemorrhage in gastric ulcer.

Dr. Dukes considered the ice bag useless excepting as it compels the patient to remain quiet.

Dr. Green stated that he thought the benefit derived from the ice bag or cake was due mostly to pressure. He had used gelatin with reasonable success in gastric ulcer.

Dr. Ewer pointed out that atropin controls hemorrhage by dilating the peripheral capillaries and ice by contracting them.

Dr. Clark said that the medical treatment had been well brought out, gastric ulcer should be treated medically from one to six months before calling in the surgeon. He emphasized the frequency of a carcinoma implanted upon the base of an ulcer giving symptoms of indigestion or neuralgia. Dr. Clark prefers double Roosevelt forceps to the single in the operation for gastroenterostomy. Dr. Hamlin preferring the single.

Dr. Crosby had seen a case of tabes operated on for gastric ulcer.

Dr. von Adelung uses hypodermic and rectal medication in gastric ulcer and prefers morphin to the ice bag to quiet patient. He emphasizes possibility of ulcer healing under medical treatment even after recurrence and tumor formation.

Dr. Pratt thinks that both atropin and adrenalin do good as long as too large doses are not prescribed.

Dr. Hamlin, in closing the discussion, stated that choice of drugs depended upon pathology of the hemorrhage, adrenalin to control capillary bleeding; atropin, bleeding from the larger vessels.

Following the discussion the association had the pleasure of listening to an interesting talk from Dr. James H. Parkinson, president of the State Society, who briefly outlined the program for the state meeting at Sacramento and emphasized the need of our practicing more gregariously and of consulting more with each other, also the need of stronger and better organization and a more elastic fee bill.

We should increase County Society membership, it helps to elevate individual standards. Character of the State Journal rests with us entirely. He advocated medical defense being taken up by the State Society and that county societies should be more active in regard to legislative matters. At the close of Dr. Parkinson's remarks the president appointed the following committees:

Program Committee: Drs. Lum, Adams and Powell.

Milk Commission: Drs. McCleve, Shuey, Hamilton, Rowe, and Nusbaumer.

On motion, to appoint committee to arrange for annual banquet, the chair appointed the program committee to act as a banquet committee.

After adjournment refreshments were served and a social hour enjoyed.

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The regular monthly meeting of the Alameda Medical Association for March was called to order at 8:20 p. m., President C. A. Dukes in the chair. The minutes of the two previous meetings were read and approved.

Dr. Stratton presented two clinical reports showing results of modern therapy in renal lesions. The first report dealt with a patient who had pain in the right dorsal lumbar region and bladder. Much pus and albumin in the urine. Illness extended over a period of some two months without yielding to usual medication. At that time a bacteriological examination of the urine showed colon infection; a bacterin from same was made. Now some seventy-eight days and patient doing well, it being some forty-three days since last recrudescence. Urinary antiseptics were continued in connection with vaccine treatment. Second case: A young woman who had been operated on twice, once for perinephritic